



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

September 10, 1999

Mr. Todd Thompson
State Water Resources Control Board, Water Quality Division
901 P St.
Sacramento, CA 95814

Dear Mr. Thompson:

Thank you for providing the Draft EIR Covering General Waste Discharge Requirements for Biosolids Land Application for review. On behalf of the U.S. EPA Region 9's Clean Water Act Compliance Office, I am submitting the following comments.

The federal biosolids standards (40 CFR 503) were written with the expectation that they be supplemented as needed with management controls at the State/local level, and hopefully this General Order (GO) with the recommended mitigation measures will serve that purpose. It is important that all nine of the Regional Boards provide input on the implementation of the order and mitigation measures.

Comments:

Mitigation Measure 4.1: Provide Soil and Site-Screening Information with the Pre-Application Report:

The GO should be amended, as recommended, to require an evaluation of the data on salinity, nutrients, and pollutants. Salinity levels in California biosolids vary widely, and some biosolids may be of concern in some instances, depending on the crop and irrigation methods.

Neither 40 CFR 503 or the GO specify the frequency of monitoring for nitrogen or other micronutrients over the course of a project. Most applicers monitor nitrogen at the same frequency as is required in 40 CFR 503 for metals for the treatment plant in question. Some applicers have found that while metals levels do not vary greatly from month to month, organic and ammonium nitrogen levels may vary considerably. The DEIR should consider the frequency of monitoring for nitrogen that will be needed during the course of a project. This could be implemented by setting frequencies in the GO, or having RWQCBs specify frequencies on a case-by-case basis.

Mitigation Measure 4.2: Grazing Restrictions:

Many biosolids do not have detectable levels of any of the SOC's, and the 90 day restriction (as opposed to EPA's 30 day restriction) in this case may not be warranted in these cases. The Regional Board could review individual project data to decide when 90 day restrictions are needed. In the case of Class A biosolids, no grazing restrictions are necessary if the biosolids do not contain SOC's.

The Regional Boards should have discretion in deciding when SOC tests must be run. POTWs over 5 mgd (serving over 50,000 people) now run these tests at least annually; however smaller plants do not currently run these tests (which are fairly costly) and they may not be necessary in the case of very small, 100% domestic facilities, or for sites that will not be used for grazing.

Mitigation Measure 4.3: Track biosolids application sites:

A tracking system is also necessary in order to verify that harvesting restrictions are observed for the full 38 months, and to track cumulative metals loadings. We would be glad to work with the State/Regional Boards in developing this database.

Mitigation Measure 6.2: Maintenance of trucks:

This should measure should be incorporated, to ensure Class B biosolids are completely contained within trucks.

Mitigation Measure 7.1 and 7.2: Provide biological information:

The requirement to assess whether special-status species occur on sites which are fallow for more than a year would be advisable prior to the application of any fertilizer or soil amendment. However, this might also deter farmers from allowing fields to remain fallow every several years as a best management practice. The requirement should be constructed so as not to be unduly burdensome for application of biosolids as opposed to other soil amendments.

While these measure does not specifically address endangered or threatened species, it should provide the information necessary to determine if there would be an impact to these species.

Mitigation Measure 10.1: Limit vehicle miles traveled to 4800 VMT

The mitigation measure, and the means by which Regional Boards would implement it, require substantial clarification. The impacts of limiting that traffic going to a particular site should be analyzed more fully, since in most cases this would result in additional overall VMT both within the Air Quality Management District (AQMD) in question, and within other AQMD's.

Treatment plants located in the South Coast Air Basin currently send more than 100 trucks per day distances of up to 400 miles per day (round trip), through the South Coast Air

Basin and into the San Joaquin, Southeast Desert, Salton Sea, and San Diego Air Basins. This results in very roughly 16,000 VMT within the South Coast Air Basin, plus roughly the same amount spread out among the other basins. Limiting VMT at individual sites in these receiving air basins would probably not alter the VMT within the South Coast Basin, since the South Coast plants would then switch to other sites within these receiving basins (using the same corridors along I-5, I-8, etc.), or switch to landfills, compost operations, or out-of-state sites also located along the same corridors in these receiving air basins. The implementation of VMT restrictions could result in a transfer of emissions, e.g. from the San Joaquin Air Basin to the Salton Sea Air Basin.

1-8
(cont)

The recommendation raises numerous questions in terms of implementation, such as:

- How would a Regional Board address two sites that are next to each other but operated by different appliers? For example, a POTW in the South Coast Air Basin sends 24 trucks per day to a site 200 miles away in the San Joaquin Air Basin, for very roughly 4,800 VMT in the San Joaquin Air Basin. Another POTW located a few miles from the first one in the South Coast Air Basin sends 24 trucks to an adjacent site run by another applier, for an additional 4,800 VMT. Would the Regional Board need to restrict the sites to 12 trucks each, or not allow the second site to operate? How would the Regional Board address this if the second site is not adjacent to the first site but 10 miles down the road from the first site? At 10 off-ramps further down the Interstate?

1-9

- If a composter in the San Joaquin Air Basin receives 24 trucks per day from POTWs in the South Coast Air Basin, plus additional truckloads of greenwaste, and trucks 36 loads per day of finished compost to a site also in the San Joaquin Air Basin where it is applied at > 20 tons/acre, will the Regional Board consider both the VMT from the POTWs to the compost operation and from the compost operation to the application site, or just from the compost operation to the site?

1-10

Sites located at the border of an AQMD would presumably be able to receive far more truckloads than sites located in the center of an AQMD, if the Regional Board only considers the VMT within the receiving AQMD.

1-11

It would be useful to assess the relative impact of rail plus truck travel (i.e. loading trailers onto railcars, transport to where they would be off-loaded back onto trucks). What would be the emissions resulting from transporting 40 truckloads of biosolids from the Los Angeles area 200 miles by rail plus about 20 VMT to a site in the San Joaquin Air District, v.s. trucking it the entire distance?

1-12

Mitigation Measure 11.1: Avoid haul routes near residential land uses:

Proposed haul routes should be reviewed as part of the pre-application review. Because application of biosolids requires more truck traffic to a site than if chemical fertilizers are used, optimum haul routes need to be established.

1-13

Mitigation Measure 13.1: Minimize Groundwater Nitrate Contamination:

These procedures should be incorporated in order to ensure that biosolids are applied at conservative rates in areas with groundwater contamination problems. Because the actual uptake of nitrogen during a growing season is dependent on numerous variables, a professional evaluation of the nitrogen loading rates should be made if there is the possibility of nitrates moving to groundwater. This level of evaluation is not necessary in areas where there is a considerable depth to useable groundwater sources.

1-14

Chapter 14: Alternatives:

The analysis of alternatives assumes up front that the Regional Boards will implement the General Order as adopted; therefore it is highly important to obtain their input at this point.

1-15

Under the land application ban alternative, there may be an increased use of waste-derived soil amendments which are not regulated at the Federal or State level. Manures are not subject to the same agronomic rate requirements.

1-16

Some editorial corrections:

Chapter 2, page 6, final paragraph: Define "exceptional quality" biosolids to include one of the vector attraction reduction options 1 - 8 in 503.33.

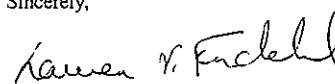
1-17

Executive Summary, page 2 and Chapter 1, Page 2: There is an erroneous statements that 40 CFR 503 applies to the generator but not the applier. The rule does set standards which the applier must comply with, subject to enforcement under Section 309 of the Clean Water Act. In reality, though, additional oversight is needed at the State/local level to ensure the standards are met.

1-18

Please call me at (415) 744-1909 with any questions on this.

Sincerely,



Lauren V. Fondahl
Biosolids Coordinator
Clean Water Act Compliance Office

Responses to Comments from U.S. Environmental Protection Agency - Region IX

- 1-1. The commenter's support of Mitigation Measure 4-1 is noted. The SWRCB will determine whether this mitigation measure is adopted.
- 1-2. The proposed GO requires nitrogen reporting annually. It is recognized that more frequent reporting may help to determine and track application rates and crop needs in areas with existing groundwater nitrate problems. However, SWRCB staff does not intend to overregulate the agricultural industry. RWQCB staff members have reviewed the proposed GO; none indicated that such a monitoring allowance is desired or deemed necessary. In cases where additional monitoring is deemed necessary, an individual, site-specific set of waste discharge requirements may be more appropriate. These decisions would be made at the RWQCB level.
- 1-3. The commenter stated that many biosolids do not have detectable SOC's and recommended that each RWQCB be given more discretionary authority to decide when the 90-day grazing restriction should be imposed.

The SWRCB staff acknowledges that when tested using commercial analytical techniques, biosolids, particularly those from rural, nonindustrial source areas (as opposed to urban-industrial areas), may not have detectable SOC's. However, many household uses of detergents and cleaning agents, cosmetics, medicines and pharmaceutical products, paints, paint products and pesticides can potentially introduce numerous SOC's into wastewater treatment plants. Many of these may also not be detected by standard commercial analytical tests. An RWQCB has little information on which to base a discretionary decision-making process. The SWRCB believes that potential SOC's in biosolids and their unknown impacts, combined with uncertain occurrence of potentially viable pathogens in biosolids warrants the prudent conservative approach in Mitigation Measure 4-2.

Also see Response to Comment 28-8.

- 1-4. The high cost of SOC testing is acknowledged. However, some SOC's were detected in more than 5% of sewage sludges in the National Sewage Sludge Survey, including some SOC's listed in the Safe Drinking Water and Toxic Enforcement Act. The National Academy of Sciences' peer review of the Part 503 regulations carefully evaluated pollutant selection and found that "while the probability that the compounds would affect human-consumed crops is very low . . . other pathways as defined in Part 503 should be re-evaluated." The monitoring requirement will allow generation of more California-specific data that may identify biosolids that need a special individual site-specific set of waste discharge requirements to address the nature of the material.

- 1-5. The importance of ensuring that all of the proposed GO's mandatory waiting periods are complied with prior to recission is acknowledged. Simply tracking, without enforcement authority, is not a feasible alternative. However, as addressed in the comment, site tracking is also an important mitigation measure for Class B biosolids land applications. Comment noted.
- 1-6. The commenter's support of Mitigation Measure 6-2 is noted.
- 1-7. The commenter stated that Mitigation Measures 7-1 and 7-2 could be burdensome for the biosolids land applier because both measures require the land applier to conduct biological surveys if the site remained fallow for more than 1 year. Because special-status species (including endangered species) could reenter areas if they have been fallow for long periods, Mitigation Measures 7-1 and 7-2 are required to ensure that biological resource impacts remain less than significant. Refer to Response to Comment 23-18 for additional information on Mitigation Measures 7-1 and 7-2.

Mitigation Measure 7-1 on page 7-12 of the draft EIR has been modified by adding the following text immediately after the word "species" in line four:

: this report must be forwarded to the appropriate regional office of the DFG and the Endangered Species Unit of the USFWS in Sacramento for review and approval of the mitigation strategy.

The same statement has been added to Mitigation Measure 7-2 on page 7-12 of the draft EIR, immediately following the word "habitats" in the last line of the mitigation.

- 1-8. See Master Response 5.
- 1-9. See Master Response 5.
- 1-10. See Master Response 5.
- 1-11. See Master Response 5.
- 1-12. See Master Response 5.
- 1-13. The commenter requested review of proposed haul routes. As stated in the proposed GO, a traffic plan will be submitted as part of the preapplication report. The traffic report shall, at the least, identify the proposed route and anticipated maximum vehicle weight for all vehicles handling biosolids.
- 1-14. The commenter's support of Mitigation Measure 13-1 is noted.

- 1-15. As the implementing agency, RWQCB input is critical to the proposed GO's success. Comment noted. Also see Response to Comment 1-2.
- 1-16. It is agreed that, under the Land Use Ban Alternative, people using biosolids may change to nonregulated sources of fertilizer, including animal manures, which could result in higher nitrate concentrations in soil and groundwater than would exist using biosolids regulated by the proposed GO.
- 1-17. To clarify the definition of "exceptional quality" biosolids, the last complete sentence on page 2-6 of the draft EIR is hereby revised to read:
- Biosolids are considered Class A Exceptional Quality (EQ) if they meet all of the pollutant concentration limits and vector attraction reduction options 1-8 in Part 503.88, as well as Class A pathogen reduction standards.
- 1-18. Comment noted. See Responses to Comments 14-3, 14-5, and 14-17.